DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 1-8 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Upton US

(2003/0093403) in view of Kennedy USP (6,754,192).

Regarding Claim 1, Upton discloses a method of notifying to at least one application of

an application layer of the network and adapted to execute on the network, the method

comprising the following steps:

registering said at least one application with notification means provided to the

application (**see Fig. 1, Client application 100 & Para [0037] & [0088]**)

extracting information with which the application has previously been registered, (**see

Fig. 1, Application view 102, Adapters 106-108 & Para [0021] lines 8-11**)

forwarding said information extracted by the notification means to the application, (**see Para [0021]**)

Referring to Fig. 1, Upton illustrates a system for establishing an enterprise wide, united framework for integrating any current or future application Adapters can simplify integration efforts by allowing each application to be integrated with an application server, (**i.e., steps are performed within an application server, see Para [0027]**)

Upton does not disclose a method of notifying changes of state in the resources of a network comprising: a node with a change-of-state notification means provided on the node, extracting routing information from a transport or network layer of the network with said change-of-state notification means, and forwarding said routing information. However the limitations would be rendered obvious in view of the teachings of Kennedy USP (6,754,192).

Kennedy discloses a method of notifying changes of state (**see Col. 2 lines 58-67 & Col. 3 lines 1-10**) in the resources of a network (**see Fig. 1, ad hoc network 10**) to at least one node of the network and adapted to execute on the network, the method comprising the following steps:

Referring to Fig. 1, Kennedy illustrates changes of state within a network where a plurality of nodes within a network, are capable of failure and lack availability at different

times, **see Col. 2 lines (58-67**). A process switch message is communicated to the

nodes, which serves as notification for the changes within the network, **(see Col. 3**

Lines 1-10).

Kennedy discloses collecting routing information from a transport or network layer

through updated routing tables, **(see Col. 5 Lines 1-35, i.e., proactive routing**

(OSLR)).

Kennedy teaches new applications are important in mobile ad hoc networks and a

serious challenge is faced when nodes in a network must self organize due to a lack of

a fixed infrastructure and information becomes obsolete due to changes in the network

topology occurs, **see Col. 1 lines 35-65.** Kennedy suggests a routing protocol needs to

adapt to frequent topology changes, **see Col. 1 lines 65-66)**

Therefore it would have been obvious to one of ordinary skill in the art at the time of the

invention for registering the application of Upton who discloses registering said at least

one application with notification means provided to the application, extracting

information with which the application has previously been registered, and forwarding

said information extracted by the notification means to the application, and perform the

steps within a network node as taught by Kennedy who discloses a node with change of

state notification means, collecting routing information from a transport or network layer

with said change-of-state notification means, which would result in extracting and

forwarding the routing information to an application based on a change of state in a

network, because the teaching lies in Kennedy to adapt to frequent topology changes in

a mobile ad hoc network.

Regarding Claim 2, the combination of Upton in view of Kennedy disclose a change-of-

state notification method according to

claim 1, wherein, during the registering step by which the application was registered

with the change-of-state notification means **(Upton see Para [0088])**, a fraction of

nodes and/or of links of the network is selected so that the information that is extracted

and forwarded to said application is routing information relating to said selected fraction

of the nodes and/or of the links, **(See Kennedy Col. 3 Lines 5-10 & Col. 5 Lines 35-**

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Regarding Claim 3, the combination of Upton in view of Kennedy disclose a change-of-

state notification method according to claim 1, wherein the network is an ad-hoc

network **(Kennedy, see Fig. 1)**, and the routing information is extracted by interrogating

a routing protocol implemented in the ad-hoc network, **(Kennedy further teaches an**

ad-hoc network see Col. 2 Lines 35-40. Kennedy further teaches a reactive routing

protocol which interrogates routing information from updated route tables when

necessary, see Col. 5 Lines 1-10).

Regarding Claim 4, the combination of Upton in view of Kennedy disclose a change-of-

state notification method according to

claim 3, wherein the routing information is extracted from routing tables exchanged by a

proactive routing protocol of the ad-hoc network, in particular the OLSR protocol,

(Kennedy further teaches a proactive OLSR routing protocol is implemented by

providing route information from routing tables, see Col. 6 Lines 60-67).

Regarding Claim 5, the combination of Upton in view of Kennedy disclose a change-of-

state notification method according to

claim 1, further including a step of dynamically extending the notification means during

which new extraction rules are introduced into the notification means corresponding to

new routing information that has been deployed on the network, **(Kennedy further**

teaches new routing information in the network where a proactive protocol is

switched to a reactive protocol, and a new route information is determined, Col. 9

see Lines 38-45).

3.   Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kennedy USP (6,754,192) in view of Upton US (2003/0093403)

Regarding Claim 6, Kennedy discloses a computer-readable recording medium storing

a computer program for performing a change-of-state notification method (**see Col. 2**

lines 58-67 & Col. 3 lines 1-10), the method executed by a computer, wherein the

program includes, a node that has instructions causing the computer **(see Col. 3 lines 63 - Col. 4 lines 1-35)** to:

Kennedy discloses a method of notifying changes of state **(see Col. 2 lines 58-67 & Col. 3 lines 1-10)** in the resources of a network **(see Fig. 1, ad hoc network 10)** to at least one node of the network and adapted to execute on the network, the method comprising the following steps:

Referring to Fig. 1, Kennedy illustrates changes of state within a network where a plurality of nodes within a network, are capable of failure and lack availability at different times, **see Col. 2 lines (58-67)**. A process switch message is communicated to the nodes, which serves as notification for the changes within the network, **(see Col. 3 Lines 1-10)**.

Kennedy discloses collecting routing information from a transport or network layer through updated routing tables, **(see Col. 5 Lines 1-35, i.e., proactive routing (OSLR))**.

Kennedy teaches new applications are important in mobile ad hoc networks and a serious challenge is faced when nodes in a network must self organize due to a lack of a fixed infrastructure and information becomes obsolete due to changes in the network

topology occurs, **see Col. 1 lines 35-65.** Kennedy suggests a routing protocol needs to

adapt to frequent topology changes, **see Col. 1 lines 65-66**)

Kennedy does not disclose instructions causing the computer to: operate as means for

registering the application of the node with a change-of- state notification means

provided on the node, operate as means for extracting routing information, operate as

means for forwarding the extracted routing information to the application, wherein

registering of the application of the node, extracting routing information and forwarding

the extracted routing information are performed within a same node of the network.

However the limitations would be rendered obvious in view of the teachings of Upton

US (2003/0093403)

Upton discloses means for registering at least one application with notification means

provided to the application **(see Fig. 1, Client application 100 & Para [0037] & [0088]**)

means for extracting information with the notification means, **(see Fig. 1 Application

view 102, Adapters 106-108 & Para [0021] lines 8-11**)

means for forwarding the extracted information to the application, **(see Para [0021]**)

Referring to Fig. 1, Upton illustrates a system for establishing an enterprise wide, united

framework for integrating any current or future application Adapters can simplify

integration efforts by allowing each application to be integrated with an application

server, (**i.e., steps of registering the application, extracting routing information**

and forwarding extracted routing information are performed within an application

server, see Para [0027])

Therefore it would have been obvious to one of ordinary skill in the art at the time of the

invention to implement a node as taught by Kennedy who discloses a node with change

of state notification means, collecting routing information from a transport or network

layer with said change-of-state notification means, in order to register an application and

perform the steps in the teachings of Upton within the node, who discloses means for

registering an application with notification means provided to the application, means for

extracting information with said notification means, and means for forwarding the

extracted information to the application, which would result in extracting and forwarding

the routing information to an application based on a change of state in a network,

because the teaching lies in Kennedy to adapt to frequent topology changes in a mobile

ad hoc network.

Regarding Claim 7, the claim is directed towards a system including computer program

instructions when executed by an application causes a node to perform the method of

claim 6. Therefore claim 7 is rejected over Upton in view of Kennedy, as in claim 6.

Regarding Claim 8, the claim is directed towards an apparatus including computer program instructions causing a node to perform the method of claim 6. Therefore claim 8 is rejected over Upton in view of Kennedy, as in claim 6.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADNAN BAIG whose telephone number is (571) 270-7511. The examiner can normally be reached on Mon-Fri 7:30m-5:00pm eastern Every other Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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